

## Abstract

An MRI apparatus having a pulse sequence of dynamic MRA performs a pulse sequence for monitoring arrival of a contrast agent at a blood vessel of interest. The pulse sequence is substantially the same as the imaging sequence except that the phase-encode number and/or the slice-encode number is small. A time-series image reconstructed by using data measured under the condition of applying gradient magnetic fields with a low spatial resolution is displayed to ascertain that the contrast agent has arrived at the blood vessel of interest. When the contrast agent arrives at the blood vessel of interest, the phase-encode and slice-encode are added to continue the substantial measurement pulse sequence without changing the pulse sequence itself. The first image of the substantial measurement is produced by interpolating image data with the data acquired at the time of arrival of the contrast agent in monitoring. Thus, the arrival time of the contrast agent can be reliably monitored with high time-resolution and the substantial measurement can be performed with most suitable timing to obtain an excellent blood vessel image.